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Messages: Proposed Examiner's Amendment for 09/689,952 (Attorney Docket No. 21715/1010)

Examiner's Amendments to the Claims:

Cancel claims 67 and 68.

Claims 26, 53, 59 and 74 have been amended as follows:

26. (Currently amended) A method for inhibiting bacterial growth, comprising contacting bacteria *in vitro* with an amount of an inhibitor effective to reduce ~~the~~ a DnaI activity of a polypeptide comprising the amino acid sequence of SEQ ID NO: 16, wherein said inhibitor inhibits bacterial growth.

53. (Currently amended) A method for inhibiting bacterial growth, comprising contacting bacteria *in vitro* with an effective amount of an inhibitor that decreases ~~the~~ a DnaI activity of a polypeptide selected from the group consisting of:

- a polypeptide comprising the amino acid sequence of SEQ ID NO: 2;
- a polypeptide comprising the amino acid sequence of SEQ ID NO: 16; and
- a polypeptide comprising the amino acid sequence of SEQ ID NO: 18,

wherein said inhibitor inhibits bacterial growth.

59. (Currently Amended) A method for inhibiting bacterial growth, comprising contacting a bacteria *in vitro* with an amount of an inhibitor effective to decrease the activity of a polypeptide selected from the group consisting of:

- a Dnal polypeptide comprising at least ~~75%~~ 50% identity ~~over 50 or more amino acids~~ to the amino acid sequence of SEQ IID NO: 2;
- ~~a Dnal polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 2;~~

~~— a DnaI polypeptide comprising at least 75% identity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 16;~~

~~— a DnaI polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 16;~~

~~— a DnaI polypeptide comprising at least 75% identity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 18;~~

~~— a DnaI polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 18;~~ and

- a DnaI polypeptide comprising fragments ~~comprising an amino acid sequence having at least 50 contiguous amino acids from~~ of the amino acid of SEQ ID NO: 2; ~~SEQ ID NO: 16; and SEQ ID NO: 18;~~

wherein said polypeptide has an activity selected from the group consisting of:

a) directly interacting with bacteriophage 77 ORF 104 protein or a DnaI-binding fragment thereof in a manner that results in at least 10 fold reduction of ^{3}H-thymidine incorporation in a bacterial DNA replication assay relative to ^{3}H-thymidine incorporation in an assay lacking bacteriophage 77 ORF 104 protein or a DnaI-binding fragment thereof;

b) directly interacting with bacteriophage 77 0RF 104 protein or a DnaI-binding fragment thereof in a manner that results in at least 10% inhibition of plasmid replication by bacteriophage 77 ORF 104 protein or a DnaI-binding fragment in a plasmid replication assay; and

c) aiding in the loading of S. aureus DnaC helicase onto replicative primosomes,

wherein said inhibitor inhibits bacterial growth.

74. (Currently Amended) A method for inhibiting bacterial DNA synthesis, comprising contacting a bacterium *in vitro* with an effective amount of an inhibitor which decreases the activity of a polypeptide selected from the group consisting of:

- a DnaI polypeptide comprising at least ~~75%~~ 50% identity ~~over 50 or more amino acids~~ to the amino acid sequence of SEQ IID NO: 2;
- ~~a DnaI polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 2;~~
- ~~a DnaI polypeptide comprising at least 75% identity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 16;~~
- ~~a DnaI polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 16;~~
- ~~a DnaI polypeptide comprising at least 75% identity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 18;~~
- ~~a DnaI polypeptide comprising at least 85% similarity over 50 or more amino acids to the amino acid sequence of SEQ ID NO: 18;~~ and
- a DnaI polypeptide comprising fragments ~~comprising an amino acid sequence having at least 50 contiguous amino acids from~~ of the amino acid of SEQ ID NO: 2; ~~SEQ ID NO: 16; and SEQ ID NO: 18;~~

wherein said polypeptide has an activity selected from the group consisting of:

a) directly interacting with bacteriophage 77 ORF 104 protein or a DnaI-binding fragment thereof in a manner that results in at least 10 fold reduction of ^{3}H-

thymidine incorporation in a bacterial DNA replication assay relative to ^{3}H-thymidine incorporation in an assay lacking bacteriophage 77 ORF 104 protein or a DnaI-binding fragment thereof;

b) directly interacting with bacteriophage 77 0RF 104 protein or a DnaI-binding fragment thereof in a manner that results in at least 10% inhibition of plasmid replication by bacteriophage 77 ORF 104 protein or a DnaI-binding fragment in a plasmid replication assay; and

c) aiding in the loading of S. aureus DnaC helicase onto replicative primosomes, wherein said inhibitor inhibits bacterial DNA synthesis.